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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/484,911	01/18/2000	Junichi Hagiwara	1503.63544	1265

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EXAMINER

FLEURANTIN, JEAN B

ART UNIT

PAPER NUMBER

2172

DATE MAILED: 03/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/484,911

Applicant(s)

HAGIWARA ET AL.

Examiner

Jean B. Fleurantin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: . . .

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DETAILED ACTION

1. Claims 1-16 are presented for examination.

Information Disclosure Statement

2. The references cited in the Information Disclosure Statement, PTO-1449, Paper Number 3, have been fully considered.

Drawings

3. The drawings filed on 01/18/2000 are approved by the Draftsperson under 37 CFR 1.84 or 1.152 as indicated in the "Notice of Draftsperson's Patent Drawing Review," PTO-948.

Claim Rejections - 35 U.S.C. § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuechler et al. (US Pat. No. 4,811,199) ("Kuechler").

As per claims 1, 12, and 15 Kuechler substantially teaches a search system as claimed, comprises an instructing device instructing an information search based on the specification information (thus, a query is processed by accessing the pertinent topological map or maps based upon the specifications of the query and identifying from the map or maps the information elements in the information base which meet the specifications of the query, which is equivalent

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to an instructing device instructing an information search based on the specification information) (see col. 2, lines 49-53). But, Kuechler does not explicitly indicate the step of an inputting device inputting specification information for collectively specifying a plurality of search condition combinations. However, Kuechler implicitly indicates the step the input subsystem accepts input from an input device 22 the input device 22 is capable of receiving information base elements where an information base element is comprised of one or more attributes and the corresponding values for these attributes the input subsystem 10 is used to process the individual information elements as they are input to the information base; which is readable as an inputting device inputting specification information for collectively specifying a plurality of search condition combinations (see col. 5, lines 50-59). Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Kuechler with the step of an inputting device inputting specification information for collectively specifying a plurality of search condition combinations. This modification would allow the teachings of Kuechler to improve the accuracy and the reliability of the search system and method based on search condition combinations, and provide selective access permits the system to abstract the information base and deal only with the elements which are pertinent to the specification of the query (col. 1, lines 35-38).

As per claim 2, Kuechler substantially teaches the search system as claimed, wherein said inputting device inputs the specification information in a form of a table (thus, each element in the information base is comprised of attributes each attribute type can be either "Alpha" meaning

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that it can store characters or digits or "Integer" meaning that it can store an integer value, the information base contains 103 records and slot 103 is currently the end of the file for this information base; which is readable as wherein said inputting device inputs the specification information in a form of a table).(see cols. 6-7, lines 51-19).

As per claim 3, in addition to the discussion in claim 1 above, Kuechler further teaches a generating device automatically generating the plurality of search condition combinations based on the specification information (thus, the output map which is generated indicates which of the elements in the superset do meet the specification of the query and which of those elements may meet the specification those elements which the map indicates do meet the specification are known with certainty without ever having accessed or inspected the stored information elements themselves, which is readable as a generating device automatically generating the plurality of search condition combinations based on the specification information) (see col. 6, lines 14-21).

As per claim 4, Kuechler substantially teaches the search the system as claimed, further comprises a changing device changing a portion of search conditions included in the specification information, wherein said instructing device instructs a selective information search for the changed portion (thus, the output map which is generated indicates which of the elements in the superset do meet the specification of the query and which of those elements may meet the specification those elements which the map indicates do meet the specification are known with certainty without ever having accessed or inspected the stored information elements themselves, now only those elements which the output map indicates may meet the specification are accessed

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and inspected to determine which ones do meet the specification; which is readable as a changing device changing a portion of search conditions included in the specification information, wherein said instructing device instructs a selective information search for the changed portion) (see col. 6, lines 14-24).

As per claims 5, 13, and 16 in addition to the discussion in claim 1 above, Kuechler does not explicitly indicate the step of an obtaining device obtaining a plurality of search results for a plurality of search condition combinations; and an outputting device collectively outputting output information corresponding to the plurality of search results. However, Kuechler implicitly teaches the step of the output subsystem 30 is given a query 32 as input, i.e., a reference to the information on the basis of a specification of the values of one or more attributes the query 32 may be entered into the output subsystem 30 by any suitable input device and may for example, utilize the same input device 22 as is employed by the input subsystem 20, the output subsystem 30 then utilizes the storage device 14 to retrieve the topological maps 16 of the attributes referenced by the specification these topological maps are then manipulated in accord with the query the end result being one or more output maps 18 indicating information elements which either do meet the specification or may meet the specification; which is readable as an obtaining device obtaining a plurality of search results for a plurality of search condition combinations; and an outputting device collectively outputting output information corresponding to the plurality of search results (see cols. 5-6, lines 62-8). Also, in column 6, lines 24 through 31, Kuechler further teaches the steps of the results of the query are communicated to the user by an output

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device 34, the output subsystem is capable of rapidly resolving various kinds of queries including queries as to exact values of certain attributes range queries and complex queries about multiple attributes using Boolean logic; which is readable as an outputting device collectively outputting output information corresponding to the plurality of search results. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Kuschler with the step of an obtaining device obtaining a plurality of search results for a plurality of search condition combinations; and an outputting device collectively outputting output information corresponding to the plurality of search results. This modification would allow the teachings of Kuechler to improve the accuracy and the reliability of the search system and method based on search condition combinations, and provide selective access permits the system to abstract the information base and deal only with the elements which are pertinent to the specification of the query (col. 1, lines 35-38).

As per claim 6, Kuechler substantially teaches the search the system as claimed, wherein said outputting device outputs the output information in a form of a table (thus, the output map which is generated indicates which of the elements in the superset do meet the specification of the query and which of those elements may meet the specification, which is readable as wherein said outputting device outputs the output information in a form of a table) (see col. 6, lines 14-17).

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As per claim 7, Kuechler substantially teaches the search the system as claimed, wherein said outputting device switches and outputs at least two or more items of information among the number of hits, a related word, and a search result list, as the output information (thus, the output map which is generated indicates which of the elements in the superset do meet the specification of the query and which of those elements may meet the specification those elements which the map indicates do meet the specification are known with certainty without ever having accessed or inspected the stored information elements themselves now only those elements which the output map indicates may meet the specification are accessed and inspected to determine which ones do meet the specification the results of the query are communicated to the user by an output device 34; which is readable as wherein said outputting device switches and outputs at least two or more items of information among the number of hits, a related word, and a search result list, as the output information) (see col. 6, lines 14-26).

As per claim 8, Kuechler substantially teaches the search the system as claimed, further comprises a reflecting device reflecting a search result regarding a changed portion on the output information when the portion of search conditions included in the plurality of search condition combinations is changed (thus, the system generally indicated by the reference character 10 is used to access and manipulate an information base 12 which is stored in a storage device 14, the information base 12 is comprised of one or more information elements each information element is comprised of one or more attributes 'or fields' one or more of these attributes having an orderable value by "orderable value" is meant that the attribute of the element has a value capable

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of being evaluated and being placed in some order in relation to the value of that attribute for other elements in the information base; which is readable as a reflecting device reflecting a search result regarding a changed portion on the output information when the portion of search conditions included in the plurality of search condition combinations is changed) (see col. 5, lines 35-46).

As per claim 9, Kuechler substantially teaches the search the system as claimed, wherein said outputting device comprises a graph device outputting graph information which represents the output information (thus, range query one would be resolved and the result placed in output map one, range query two would be resolved and placed in output map two then output map one would be AND'ed with output map two according to the truth table for AND to give an output result, result indicates those information elements which do meet the specification; which is readable as wherein said outputting device comprises a graph device outputting graph information which represents the output information) (see cols 15-16, lines 40-30).

As per claim 10, Kuechler substantially teaches the search the system as claimed, wherein said outputting device selectively outputs a search result list corresponding to a portion of graph information of the number of hits, when said graph device outputs the graph information of the number of hits (thus, the output map which is generated indicates which of the elements in the superset do meet the specification of the query and which of those elements may meet the specification those elements which the map indicates do meet the specification are known with certainty without ever having accessed or inspected the stored information elements themselves

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now only those elements which the output map indicates may meet the specification are accessed and inspected to determine which ones do meet the specification the results of the query are communicated to the user by an output device 34; which is readable as wherein said outputting device selectively outputs a search result list corresponding to a portion of graph information of the number of hits, when said graph device outputs the graph information of the number of hits) (see col. 6, lines 14-26).

As per claim 11, in addition to the discussion in claim 1 above, Kuechler further teaches an outputting device collectively outputting output information corresponding to a plurality of search results for the plurality of search condition combinations (thus, the results of the query are communicated to the user by an output device 34, the output subsystem is capable of rapidly resolving various kinds of queries including queries as to exact values of certain attributes range queries and complex queries about multiple attributes using Boolean logic; which is readable as an outputting device collectively outputting output information corresponding to a plurality of search results for the plurality of search condition combinations) (see col. 6, lines 24-31).

As per claim 14, in addition to the discussion in claims 1 and 5 above, Kuechler further teaches performing an information search based on specified information (thus, a query is processed by accessing the pertinent topological map or maps based upon the specifications of the query and identifying from the map or maps the information elements in the information base which meet the specifications of the query, which is readable as performing an information search based on specified information) (see col. 2, lines 49-53).

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5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ohtaki et al. US Patent Number 5,123,103 relates to software specification. Matsuzawa et al. US Patent Number 6,085,185 relates to retrieval system using the multimedia database. Takahashi et al. US Patent Numbers 6,105,022 and 6,226,632 are relates to text searching in a text control system utilizing a computer.

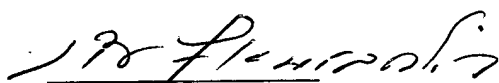
Conclusion

6. Any inquiry concerning this communication from examiner should be directed to Jean Bolte Fleurantin at (703) 308-6718. The examiner can normally be reached on Monday through Friday from 7:30 A.M. to 6:00 P.M.

If any attempt to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Mrs. KIM VU can be reached at (703) 305-8449. The FAX phone numbers for the Group 2100 Customer Service Center are: *After Final* (703) 746-7238, *Official* (703) 746-7239, and *Non-Official* (703) 746-7240. NOTE: Documents transmitted by facsimile will be entered as official documents on the file wrapper unless clearly marked "***DRAFT***".

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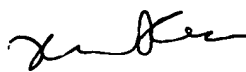
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 2100 Customer Service Center receptionist whose telephone numbers are (703) 306-5631, (703) 306-5632, (703) 306-5633.



Jean Bolte Fleurantin

March 7, 2002

JBF/


HOSAIN T. ALAM
PRIMARY EXAMINER